

Figure 1

ATGAAGATTACAAAACCATGTGGCCATGTTGCTAGCCCCGGAATGGGCCACA
TCATCCCGGTGATCGAGCTCGGAAAACGCTTAGCTGGTCCCACGGCTTCGATGT
CACCATTTTCGTCCTTGAAACCGACGCAGCCTCAGCTCAATCTCAATTCCTTAAC
CACCAGGCTGCGACGCGGCCCTTGTTGATATCGTTGGCCTCCCAACGCCCGATAT
CTCCGGTTTAGTCGACCCATCAGCCTTTTTTGGGATCAAGCTCTTGGTCATGATGC
GTGAGACCATTCCTACCATCCGGTCAAAGATAGAGGAGATGCAACACAAACCAA
CGGCTCTGATCGTAGACITGTTTGGTTGGACGCGATAACCGCTCGGTGGTGAGTTC
AACATGTTGACTTATATCTTCATCGCTTCAAACGCACGTTTTCTCGCGGTGGCTTT
GTTTTTCCCAACGTTGGACAAAGACATGGAAGAAGAGCACATAATCAAGAAGCA
ACCTATGGTTATGCCTGGATGTGAACCGGTTCCGGTTTGAAGATACACTTGAAACA
TTCTTGACCCAAACAGCCAACTCTACCGGGAATTTGTTCCTTTCGGTTCGGTTTT
CCCAACGTGTGATGGTATTATTGTGAATACATGGGATGATATGGAGCCCAAACT
TTGAAATCTCTTCAAGACCCAAAGCTCTTGGGTCGAATTGCTGGTGTACCGGTTTA
TCCAATTGGTCCTTTGTCTAGACCGGTTGATCCATCTAAAATAATCATCCGGTTT
TGGATTGGTTAAACAAACAGCCGGACGAGTCGGTACTTTACATTTCAATTTGGAAG
CGGTGGCTCTCTCTCGGCTAAACAATAACCGAATTGGCTTGGGGACTTGAGATG
AGTCAGCAACGGTTCGTTTGGGTGGTTTCGACCCCGGTGGACGGTTCAGCTTGCA
GTGCATATTTATCCGCTAACAGTGGTAAAATACGAGACGGTACACCTGATTATCT
CCCGGAAGGTTTTGTTAGCCGGACTCATGAGAGAGGCTTTATGGTCTCTTCTTGG
GCTCCCCAAGCGGAGATCTTGGCCCACCAAGCCGTAGGTGGGTTTCTAACTCACT
GCGGTTGGAATTCGATTCTCGAGAGCGTCGTTGGTGGCGTTCCGATGATCGCGTG
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GTTGCCGTCCGCTCTAAGAACTACCGTCGGAGGGAGTGATTACGAGGGCGGAG
ATCGAGGCGTTGGTGAGAAAGATCATGGTGGAGGAGGAAGGTGCTGAGATGAGA
AAGAAGATAAAGAAGCTGAAAGAGACCGCTGCCGAATCGCTGAGTTGCGACGGT
GGAGTGGCGCATGAATCGTTGTCAAGAATCGCCGACGAGAGCGAGCATCTTTTGG
AGCGTGTGAGGTGCATGGCACGTGGTGCCTAG

Figure 2

MKITKPHVAMFASPGMGHIIPVIELGKRLAGSHGFDVTIFVLETDAASAQSQF
LNSPGCDAALVDIVGLPTPDISGLVDPSAFFGIKLLVMMRETIPTIRSKIEEMQH
KPTALIVDLFGLDAIPLGGEFNMLTYIFIASNARFLAVALFFPTLDKDMEEHHI
KKQPMVMMPGCEPVRFEDTLETFLDPNSQLYREFVPFGSVFPTCDGIIVNTWDD
MEPKTLKSLQDPKLLGRIAGVPVYPIGPLSRPVDPSKTNHPVLDWLNKQPDES
VLYISFGSGGSLSAKQLTELAWGLEMSQQRFWVVRPPVDGSACSAYLSANS
GKIRDGTPDYLPEGFVSRThERGFMVSSWAPQAEILAHQAVGGFLTHCGWNS
ILES VVGVP MIAWPLFAEQMMNATLLNEELGVA VR SKKL PSEG VITRAEIEA
LVRKIMVEEEGAEMRKKIKK LKETAAESLSCDGGVAHESLSRIADESEHLLER
VRCMARGA

Figure 3

ATGCATATCA CAAAACCACA CGCCGCCATG TTTTCCAGTC CCGGAATGGG
CCATGTCATC CCGGTGATCG AGCTTGGAAG GCGTCTCTCC GCTAACAACG
GCTTCCACGT CACCGTCTTC GTCCTCGAAA CCGACGCAGC CTCCGCTCAA
TCCAAGTTCC TAAACTCAAC CGGCGTCGAC ATCGTCAAAC TTCCATCGCC
GGACATTTAT GGTTTAGTGG ACCCCGACGA CCATGTAGTG ACCAAGATCG
GAGTCATTAT GCGTGCAGCA GTTCCAGCCC TCCGATCCAA GATCGCTGCC
ATGCATCAAA AGCCAAACGGC TCTGATCGTT GACTTGTTTG GCACAGATGC
GTTATGTCTC GCAAAGGAAT TTAACATGTT GAGTTATGTG TTTATCCCTA
CCAACGCACG TTTTCTCGGA GTTTCGATTT ATTATCCAAA TTTGGACAAA
GATATCAAGG AAGAGCACAC AGTGCAAAGA AACCCACTCG CTATACCGGG
GTGTGAACCG GTTAGGTTTCG AAGATACTCT GGATGCATAT CTGGTTCCCG
ACGAACCGGT GTACCGGGAT TTTGTTTCGTC ATGGTCTGGC TTACCCAAAA
GCCGATGGAA TTTTGGTAAA TACATGGGA GAGATGGAGC CCAAATCATT
GAAGTCCCTT CTAAACCCAA AGCTCTTGGG CCGGGTTGCT CGTGTACCGG
TCTATCCAAT CGGTCCCTTA TGCAGACCGA TACAATCATC CGAAACCGAT
CACCCGGTTT TGGATTGGTT AAACGAACAA CCGAACGAGT CGGTTCTCTA
TATCTCCTTC GGGAGTGGTG GTTGTCTATC GGCGAAACAG TTAAGTGAAT
TGGCGTGGGG ACTCGAGCAG AGCCAGCAAC GGTTCGTATG GGTGGTTCGA
CCACCGGTCG ACGGTTCGTG TTGTAGCGAG TATGTCTCGG CTAACGGTGG
TGGAAACCGAA GACAACACGC CAGAGTATCT ACCGGAAGGG TTCGTGAGTC
GTACTAGTGA TAGAGGTTTC GTGGTCCCCT CATGGGCCCC ACAAGCTGAA
ATCCTGTCCC ATCGGGCCGT TGGTGGGTTT TTGACCCATT GCGGTGGGAG
CTCGACGTTG GAAAGCGTCG TTGGCGGCGT TCCGATGATC GCATGGCCAC
TTTTTGCCGA GCAGAAATATG AATGCGGCGT TGCTCAGCGA CGAACTGGGA
ATCGCAGTCA GATTGGATGA TCCAAAGGAG GATATTTCTA GGTGGAAGAT
TGAGGCGTTG GTGAGGAAGG TTATGACTGA GAAGGAAGGT GAAGCGATGA
GAAGGAAAGT GAAGAAGTTG AGAGACTCGG CGGAGATGTC ACTGAGCATT
GACGGTGGTG GTTTGGCGCA CGAGTCGCTT TGCAGAGTCA CCAAGGAGTG
TCAACGGTTT TTGGAACGTG TCGTGGACTT GTCACGTGGT GCTTAG

Figure 4

MHITKPHAAM FSSPGMGHVI PVIELGKRLS ANNGFHVTVF VLETDAAASQ
SKFLNSTGVD IVKLPSPIY GLVDPDDHVV TKIGVIMRAA VPALRSKIAA
MHQKPTALIV DLFGTDALCL AKEFNMLSYV FIPTNARFLG VSIYYPNLDK
DIKEHTVQR NPLAIPGCEP VRFEDTLDAY LVPDEPVYRD FVRHGLAYPK
ADGILVNTWE EMEPKSLKSL LNPILLGRVA RVPVYPIGPL CRPIQSSETD
HPVLDWLNEQ PNESVLYISF GSGGCLSAKQ LTELAWGLEQ SQORFVWVVR
PPVDGSCCSE YVSANGGGTE DNTPEYLPEG FVSRTSDRGF VVPSWAPQAE
ILSHRAVGGF LTHCGWSSTL ESVVGGVPMI AWPLFAEQNM NAALLSDELG
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DGGGLAHESL CRVTKECQRF LERVVDLSRG A

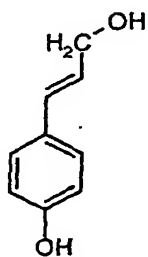
Figure 5

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CCATGTCTCTC CCGGTGATCG AGCTAGCTAA GCGTCTCTCC GCTAACCACG
GCTTCCACGT CACCGTCTTC GTCCTTGAAA CTGACGCAGC CTCCGTTACG
TCCAAGCTCC TTAACCTAAC CCGTGTGAC ATCGTCAACC TTCCATCGCC
CGACATTTCT GGCTTGGTAG ACCCCAACGC CCATGTGGTG ACCAAGATCG
GAGTCATTAT GCGTGAAGCT GTTCCAACCC TCCGATCCAA GATCGTTGCC
ATGCATCAAA ACCCAACGGC TCTGATCATT GACTTGTTTG GCACAGATGC
GTTATGTCTT GCAGCGGAGT TAAACATGTT GACTTATGTC TTTATCGCTT
CCAACGCGCG TTATCTCGGA GTTTCGATAT ATTATCCAAC TTTGGACGAA
GTTATCAAAG AAGAGCACAC AGTGCAACGA AAACCGCTCA CTATACCGGG
GTGTGAACCG GTTAGATTTG AAGATATTAT GGATGCATAT CTGGTTCCGG
ACGAACCGGT GTACCACGAT TTGGTTCGTC ACTGTCTGGC CTACCCAAAA
GCGGATGGAA TCTTGGTGAA TACATGGGAA GAGATGGAGC CCAAATCATT
AAAGTCCCTT CAAGACCCGA AACTTTTGGG CCGGGTCGCT CGTGTACCGG
TTTATCCGGT TGGTCCGTTA TGCAGACCGA TACAATCATC CACGACCGAT
CACCCGGTTT TTGATTGGTT AAACAAACAA CCAAACGAGT CGGTTCTCTA
CATTTCCCTTC GGGAGTGGTG GTTCTCTAAC GGCTCAACAG TTAACCGAAT
TGGCGTGGGG GCTCGAGGAG AGCCAGCAAC GGTTTATATG GGTGGTTTGA
CCGCCCCGTTG ACGGCTCGTC TTGCAGTGAT TATTTCTCGG CTAAAGGCGG
TGTAACCAAA GACAACACGC CAGAGTATCT ACCAGAAGGG TTCGTGACTC
GTACTTGCGA TAGAGGTTTC ATGATCCCAT CATGGGCACC GCAAGCTGAA
ATCCTAGCCC ATCAGGCCGT TGGTGGGTTT TTAACACATT GTGGTTGGAG
CTCGACGTTG GAAAGCGTCC TTTGCGGCGT TCCAATGATA GCGTGGCCGC
TTTTCGCCGA GCAGAAATATG AACGCGGCGT TGCTTAGCGA TGAAGTGGGA
ATCTCTGTTA GAGTGGATGA TCCAAAGGAG GCGATTTCTA GGTCTGAAGAT
TGAGGCGATG GTGAGGAAGG TTATGGCTGA GGACGAAGGT GAAGAGATGA
GAAGGAAAGT GAAGAAGTTG AGAGACACGG CGGAGATGTC ACTTAGTATT
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Figure 6

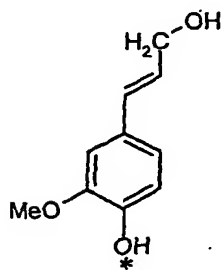
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PPVDGSSCSD YFSAKGGVTK DNTPEYLPEG FVTRTCDRGF MIPSWAPQAE
ILAHQAVGGF LTHCGWSSTL ESVLCGVPMI AWPLFAEQNM NAALLSDELG
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p-coumaryl alcohol

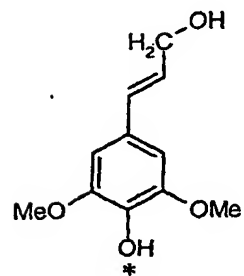


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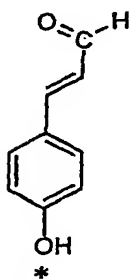
Coniferyl alcohol



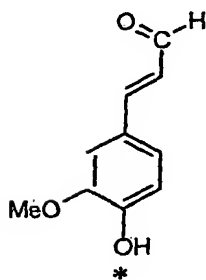
Sinapyl alcohol



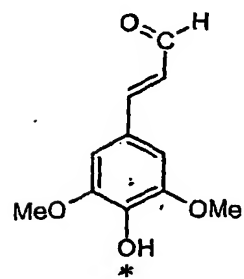
p-coumaryl aldehyde



Coniferyl aldehyde



Sinapyl aldehyde



* : position for glucosylation

Figure 7

Figure 8a

ATGAAGATTACAAAACCACATGTGGCCATGTTGCTAGCCCCGGAATGGGCCACATC
ATCCCGGTGATCGAGCTCGGAAAACGCTTAGCTGGTTCCCACGGCTTCGATGTCACC
ATTTTCGTCCCTTGAAACCGACGCAGCCTCAGCTCAATCTCAATTCCTTAACTCACCA
GGCTGCGACGCGGCCCTTGTTGATATCGTTGGCCTCCCAACGCCCGATATCTCCGGT
TTAGTCGACCCATCAGCCTT

Figure 8b

TGTGGTGACCAAGATCGGAGTCATTATGCGTGAAGCTGTTCCAACCCTCCGATCCAA
GATCGTTGCCATGCATCAAACCCAACGGCTCTGATCATTGACTTGTTTGGCACAGA
TGCGTTATGTCTTGACGCGGAGTTAAACATGTTGACTTATGTCTTTATCGCTTCCAA
CGCGCGTTATCTCGGAGTTTCGATATATTATCCAACTTTGGACGAAGTTATCAAAGA
AGAGCA

Figure 8c

CACAGTGCAAAGAAACCCACTCGCTATACCGGGGTGTGAACCGGTTAGGTTTGAAGA
TACTCTGGATGCATATCTGGTTCCCGACGAACCGGTGTACCGGGATTTTGTTCGTCA
TGGTCTGGCTTACCCAAAAGCCGATGGAATTTTGGTAAATACATGGGAAGAGATGGA
GCCCAAATCATTGAAGTCCCTTCTAAACCCAAAGCTCTTGGGCCGGGTGCTCGTGT
ACCGGTCTATCCAATCGGT